UNITED STATES PATENT AND TRADEMARK OFFICE

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KED & ASSOCIATES, LLP
P.O. Box 221200
Chantilly, VA 20153-1200

EXAMINER
KHAN, USMAN A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 July 2009</u>.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,4-7,9-11,13-20,22-24,28,29,31-36,39,41,44-47 and 50</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) <u>1,4-7,9-11,13-20,22-24,28,29 and 31-34</u> is/are allowed.
6)☒ Claim(s) <u>35,36,39,41,44-47 and 50</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>10 December 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some *   c)☐ None of:
       1.☒ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed on 07/29/2009 with respect to amended claims 1, 4-7, 9-11, 13-20, 22-24, 28, 29, and 31-34 have been considered and are persuasive hence claims 1, 4-7, 9-11, 13-20, 22-24, 28, 29, and 31-34 are allowed.

2. Applicant's arguments filed on 07/29/2009 with respect to amended claims 39, 41, 44-47, and 50 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed on 07/29/2009 with respect to claims 35 - 36 have been considered but are not persuasive.

Please refer to the following office action, which clearly sets forth the reasons for non-persuasiveness.

Regarding **claims 35 - 36**, Applicant argues that the cited prior art does not teach determining an average value of a stroke thickness.

However, the examiner kindly notes that as discussed in the previous office action figures 11 and 16 and column 12 lines 49 et seq. and column 15 liens 6 et seq.; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 et seq. and column 15 liens 6 et seq.; means for recognizing an object (a human face, for example) but can be

anything in the region even text as taught by Sotoda. The average value of the stroke

thickness can be broadly read as the size at that location which Sotoda teaches.

4. Regarding objection to specification provided in the previous office action for

failing to provide a descriptive title. Applicant has amended the title of the invention to

overcome the objection to the specification.

5. Applicant has canceled claims 42 - 43 and 49 to overcome the 35 U.S.C. 112,

first paragraph rejection provided in the previous office action.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 35 - 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sotoda et al. (US patent No. 5,835,641) in view of Fujii et al. (US PgPub No.

2002/0122121).

Regarding **claim 35**, Sotoda et al. teaches digital camera zoom method for a

mobile communication terminal (column 7 lines 17 *et seq.*; zoom control means) the

comprising:

detecting text (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example) but can be any thing in the region even text; also column 7 lines 17 *et seq.*; size);

detecting an average value of a stroke thickness of the text by searching **a plurality of upper search lines and a plurality of lower search lines** of the photographic screen (figure 12a – 12b items 33 and 35; the upper portion lines and lower portion lines of items 33 and 35 and figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example) but can be any thing in the region even text); and

determining a size of the text based on the determined average value of the stroke thickness of the text (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; also column 7 lines 17 *et seq.*; size);

comparing the calculated size of the text with a reference value and calculating a zoom ratio based on the comparison (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition and applying the zoom ratio to the photographic object also figures 12 (a) item 33, figure 12(b) item 35,

figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; this region can be considered a normal region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example); also column 7 lines 17 *et seq.*; size)

applying the calculated zoom ratio to the photographic screen (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 - 135).

However, Sotoda et al. fails to disclose searching a center search line of a photographic screen. Fujii et al., on the other hand teaches searching a center search line of a photographic screen.

More specifically, Fujii et al. teaches searching a center search line of a photographic screen (figures 17 – 27 and 29 - 30; item CR).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Fujii et al. with the teachings of Sotoda et al. to provide better operability as taught in paragraphs 0009 – 0011 of Fujii et al.

Regarding **claim 36**, as mentioned above in the discussion of claim 35, Sotoda et al. in view of Fujii et al. teaches all of the limitations of the parent claim. Additionally, Sotoda et al. teaches zooming the photographic screen to a maximum degree and enlarging the text (figure 12c; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example) but can be any thing in the region even text; also column 7 lines 17 *et seq.*; size).

7. Claims 39, 41, 44 - 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotoda et al. (US patent No. 5,835,641) in view of Foley (US PgPub No. 6,535,223).

Regarding **claim 39,** Sotoda et al. teaches a zoom method in a digital camera comprising: determining which one of at least two modes has been selectively set in the digital camera (column 18 lines 44 – 49; two modes), wherein the at least two modes includes a first mode and a second mode (column 18 lines 44 – 49; two modes), the first mode to zoom-process (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; also column 7 lines 17 *et seq.*; size) at least one photographic object in a different manner from the second mode (column 18 lines 44 – 49; normal and static); recognizing the at least one photographic object included in a photographic image based on the set mode (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition; also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example)); and zooming the photographic image based on a size of the recognized object (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; also column 7 lines 17 *et seq.*; size).

However, Sotoda et al. fails to disclose that recognizing includes detecting a region corresponding to the at least one photographic object and calculating a size of

the region based on a determined number of pixels occupied by the at least one photographic object. Foley, on the other hand teaches detecting a size of an object is determined by calculating a number of pixels across the object.

More specifically, Foley teaches detecting a size of an object is determined by calculating a number of pixels across the object (abstract, column 5 liens 34 – 50, and column 6 lines 23 *et seq.*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Foley with the teachings of Sotoda et al. to measure and improve image quality at the most important portions of an image quickly.

Regarding **claim 41**, as mentioned above in the discussion of claim 39, Sotoda et al. in view of Foley teach all of the limitations of the parent claim. Additionally, Sotoda et al. teaches a zoom-processing speed of the first mode is slower than a zoom-processing speed of the second mode (column 8 lines 11 – 19; speed of system).

Regarding **claim 44**, as mentioned above in the discussion of claim 39, Sotoda et al. in view of Foley teach all of the limitations of the parent claim. Additionally, Sotoda et al. teaches that the detecting is based on a color average value and a deviation of the at least one photographic object (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition).

Regarding **claim 45**, as mentioned above in the discussion of claim 39, Sotoda et al. in view of Foley teach all of the limitations of the parent claim. Additionally, Sotoda et al. teaches at least one photographic object includes a human face (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example)).

Regarding **claim 46**, as mentioned above in the discussion of claim 39, Sotoda et al. in view of Foley teach all of the limitations of the parent claim. Additionally, Sotoda et al. teaches preprocessing the photographic image before recognizing the at least one photographic object so as to minimize noise in the photographic image (column 12 lines 59 - 65).

8. Claims 47 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotoda et al. (US patent No. 5,835,641) in view of Schaeffer et al. (US PgPub No. 2002/0013161) and in further view of Foley (US PgPub No. 6,535,223).

Regarding **claim 47,** Sotoda et al. teaches a digital camera (figures 19, 25, and 27), comprising: the digital camera having a zoom function (column 7 lines 17 *et seq.*; zoom control means), wherein the zoom function has at least two modes including a first mode and a second mode (column 18 lines 44 – 49; two modes), the first mode to zoom-process (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; also column 7 lines 17 *et seq.*; size) at least one photographic

object in a different manner from the second mode (column 18 lines 44 – 49; normal and static); a controller to control the digital camera (figure 9 items 5, 9, and 15); and a display screen to display information received via a photographic image captured by the digital camera under control of the controller (figure 19 item 63), wherein the controller comprises at least one algorithm to: determine which one of the at least two modes has been selectively set in the digital camera (column 18 lines 44 – 49; two modes); recognize the at least one photographic object included in a photographic image based on said set mode (figures 11 and 16 and column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; range of colors and area recognition; also figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example)); zoom the photographic image based on the calculated size of the region (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; also column 7 lines 17 *et seq.*; size); and display the zoomed photographic image on the display screen (figure 19 item 63).

However, Sotoda et al. fails to disclose mobile communication terminal having a digital camera, comprising: a wireless communication module to receive and transmit a radio frequency; a controller to control the wireless communication module; and a display screen to display information received via the wireless communication module under control of the controller. Schaeffer et al., on the other hand teaches mobile communication terminal having a digital camera, comprising: a wireless communication module to receive and transmit a radio frequency; a controller to control the wireless

communication module; and a display screen to display information received via the wireless communication module under control of the controller.

More specifically, Schaeffer et al. teaches searching mobile communication terminal (figure 1 – 4 item 48) having a digital camera (figures 1 – 4 item 10), comprising: a wireless communication module to receive and transmit a radio frequency (figure 4 items 54 and 66); a controller to control the wireless communication module (figure 4 item 62); and a display screen to display information received via the wireless communication module under control of the controller (figure 1 item 56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Schaeffer et al. with the teachings of Sotoda et al. to provide a way to transfer images to a remote location quickly and easily.

However, Sotoda et al. in view of Schaeffer et al. fail to disclose that recognizing includes detecting a region corresponding to the at least one photographic object and calculating a size of the region based on a determined number of pixels occupied by the at least one photographic object. Foley, on the other hand teaches detecting a size of an object is determined by calculating a number of pixels across the object.

More specifically, Foley teaches detecting a size of an object is determined by calculating a number of pixels across the object (abstract, column 5 liens 34 – 50, and column 6 lines 23 *et seq.*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Foley with the teachings of

Sotoda et al. in view of Schaeffer et al. to measure and improve image quality at the most important portions of an image quickly.

Regarding **claim 50**, as mentioned above in the discussion of claim 48, Sotoda et al. in view of Schaeffer et al. and in further view of Foley teach all of the limitations of the parent claim. Additionally, Sotoda et al. teaches at least one photographic object includes a human face (figures 12 (a) item 33, figure 12(b) item 35, figure 15 item 41, and figure 34 items 131 – 135; zoom in on specific region; also column 12 lines 49 *et seq.* and column 15 liens 6 *et seq.*; means for recognizing an object (a human face, for example)).

Allowable Subject Matter

9. Claims **1, 4-7, 9-11, 13-20, 22-24, 28, 29, and 31-34** are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding **claim 1**, the prior art of record fails to teach or fairly suggest determining a size of photographic object based on the extracted color average value and the extracted deviation for each of the plurality, of upper search lines and the plurality, of lower search lines, wherein determining the size of the photographic object includes determining a number of pixels that exist within a range of a certain deviation from an average value of a specific color and determining an area of the photographic object based on the determined number of pixels; in combination with other elements of the claim.

Regarding **claims 4 – 7, 9 – 11, and 13**, these claims are allowed as being dependent from allowed independent claim 1.

Regarding **claim 14**, the prior art of record fails to teach or fairly suggest determining a size of a photographic object based on the extracted color average value and the extracted deviation for each of the plurality of lines, wherein determining the size of the photographic object includes determining a number of pixels that exist within a range of a certain deviation from an average value of a particular color and determining an area of the photographic object based on the determined number of pixels; in combination with other elements of the claim.

Regarding **claims 15 - 20 and 22 - 23**, these claims are allowed as being dependent from allowed independent claim 14.

Regarding **claim 24**, the prior art of record fails to teach or fairly suggest determining a size of a face region based on the extracted average value and the extracted deviation of the skin color for each of the plurality, of upper search lines and based on the extracted average value and the extracted deviation of the skin color for each of the plurality, of lower search lines, wherein determining the size of the face region includes determining a number of pixels that exist within a range of a certain deviation from an average value of a skin color and determining an area of the face

region based on the determined number of pixels; in combination with other elements of the claim.

Regarding **claims 28 – 29 and 31 - 34**, these claims are allowed as being dependent from allowed independent claim 24.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. a shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Fri 6:45-3:15.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Usman Khan/
Usman Khan
11/23/2009
Patent Examiner
Art Unit 2622

/Jason Chan/

Supervisory Patent Examiner, Art Unit 2622